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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,426	12/10/2003	Koji Yamada	249-321	5146
23117	7590	09/12/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			VO, ANH T N	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/731,426

Applicant(s)

YAMADA, KOJI

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,10 and 11 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 3-9 and 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/30/05, 4/19/04, 12/10/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

The references cited on PTO 1449 have been considered.

### *Claim Objection*

Claim 1 objected to because of the following informalities: the recitation "at least one" should be deleted to avoid inconsistent language. Appropriate correction is required.

## CLAIM REJECTIONS

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 11-12 are rejected under 35 USC 102 (b) as being anticipated by Cowger et al. (US Pat. 5,646,666).

Cowger et al. disclose in Figures 1-2 an ink jet printer comprising:

- a print head (26);

Art Unit: 2861

- an ink cartridge (62, 64) that supplies ink to the printhead (26);
- a casing body including a first chamber (48) allowing atmospheric air to enter therein, and a second chamber (38) storing ink therein;
- a lid member (60), disposed within the second chamber (62, 64) movably in a vertical direction, the lid member partitioning the second chamber into a first space (62) above the lid member (60) and a second space (64) below the lid member (60) for storing ink, wherein a gap is formed between an outer periphery of the lid member and an inner periphery of the second chamber such that a meniscus of ink is formed therebetween;
- a partition member (a wall that is located an element number 50) that partitions the first chamber (48) from the second chamber, the partition member provided at an upper end of the second chamber, and having a through hole (a check valve 50 disposed on a through hole) formed at a portion which is away from the inner periphery of the second chamber, the through hole allowing the atmospheric air to enter the second chamber (64);
- an elastic member (74) disposed in the second chamber (62, 64), to urge the lid member (60) upward, and maintain the second space (64) of the at least one second chamber at a negative pressure; and
- a projection (50) formed around the through hole so as to project from the partition member toward the first chamber (48).
- a platen (not shown) for feeding a recording sheet (30) in a sheet feeding direction, wherein a nozzle of the print head (26) faces the platen;
- a carriage (not shown) that reciprocally moves the print head (26) in a primary scanning direction;
- a cartridge holder (not show) that receives the ink cartridge and supplies ink to the print head (26) via a nozzle; and
- a drive controller (32) that controls operations of the ink jet printer.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2861

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 10 are rejected under 35 USC 103 (a) as being unpatentable over Cowger et al. (US Pat. 5,646,666).

Cowger et al. disclose the basic features of the claimed invention were stated above but do not disclose “a dimension of an inner periphery of the second chamber is gradually reduced toward a lower end of the second chamber and the second chamber that includes first through fourth supply chambers filled with black ink, cyan ink, magenta ink, and yellow ink, respectively”. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select changes in the shape or size or dimension of the chamber and first through fourth supply chambers filled with black ink, cyan ink, magenta ink, and yellow ink, respectively for the purpose of containing different ink colors (see US Pat. 4,965,596), since it is a mechanical design expedient for an engineer depending upon a particular environment and the applications in which the ink jet cartridge is to be used.

#### ***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references (US Pat. 4,383,263; US Pat. 4,965,596; US Pat. 5,764,259; US Pat. 5,956,061; us Pat. 6,428,152) cited in the PTO 892 form show an ink cartridge that is deemed to be relevant to the present invention. These references should be reviewed.

#### ***Allowable Subject Matter***

Claims 3-4 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior

art references of record discloses an ink cartridge comprising an ink absorber that is disposed in the first chamber and surrounding an end of the through hole facing the first chamber in the combination as claimed.

Claims 5-6 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses an ink cartridge comprising a projection that is provided on at least one of a surface of the partition member facing the first space of the second chamber and an upper face of the lid member in the combination as claimed.

Claim 8 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses an ink cartridge comprising an inlet that is connected to the first chamber, and configured to supply waste ink to the first chamber; an outlet that is connected to the second chamber at a lower end of the second chamber, through which the ink is supplied to an exterior of the ink cartridge; and a vent port that is formed at a top portion of the ink cartridge to allow the atmospheric air to enter the first chamber in the combination as claimed.

Claim 9 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses an ink cartridge comprising the first chamber that is an L-shaped space formed above and lateral to the second chamber, for collection and storage of waste ink in the combination as claimed.

Claims 13-14 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claims would be allowable because none of the prior art references of record discloses an ink cartridge comprising the cartridge holder includes an ink supply needle for removing ink from the second chamber, and an ink recovery needle that supplies a waste ink to the first chamber in the combination as claimed.


Art Unit: 2861

***CONCLUSION***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262.

The examiner can normally be reached on Tuesday to Friday from 8:00 A.M. to 6:00 P.M..

The fax number of this Group 2861 is (571) 273-8300.



**ANH T.N. VO**  
**PRIMARY EXAMINER**  
September 3, 2005